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SPHINGES AND BOMBYCES.—A REVIEW.

BY JOHN B. SMITH, SC. D.

A Synonymic Catalogue of Lepidoptera Heterocera (Moths)
by W. F. Kirby, F.L.S., F.E.S., etc. Vol. I, Sphinges and Bombyces. London: Gurney & Jackson, 1892, i—xii et 1—951.

Mr. Kirby has given us under the above title a very useful and necessary work. It makes no pretense to completeness of references, but he has "endeavored to quote all important original references to foreign species." Under this head come the American forms. Taken altogether, the volume represents an amount of labor, of which no one who has not done similar work can have the least conception. So far as I have had occasion to test the references they are accurate. Mr. Kirby makes some distinct departures in this catalogue, and his order of families and genera is quite unlike that accepted in our lists and literature. The work is an expensive one, and this will serve at least in part, as an excuse for a somewhat lengthy review of the book, giving the main features as they apply to our fauna.

In the first place, Mr. Kirby has "excluded the *Ægeriidae*, *Thyrididae*, *Euschemidae*, and a large part of the *Chrysaugidae* and *Melameridae* from the Sphinges and Bombyces," and as to the *Sesiidae*

at least, with perfect correctness in my opinion. It would have been better to have gone yet further and excluded the Cossidæ and Hepialidæ. The former family has very distinctive Pyralid characters and has little to associate them with either Sphinges or Bombyces. The Hepialidæ are still more unique, and Prof. Comstock has recently pointed out that with the Micropterygidæ they share a character not elsewhere found in the Lepidoptera and again found in the Phryganæidæ.

Family I is the Castniidæ, family II is the Cocytiidæ, family III, the Uraniidæ, under the first of which only are there any North American species. *Megathymus* is, in my opinion, a true butterfly—not a moth.

Family IV, the Agaristidæ, contains of our forms, the genera *Pseudalypia*, *Alypiodes*, *Androloma*, *Alypia*, *Psychomorpha*, *Euedwardsia*, *Copidryas*, *Fenaria*, *Euthisanotia* and *Ciris*. Under *Alypiodes* we have *creescens* Wlk., with *grotei* Bdv. and *flavilinguis* Grt., as synonyms; and *bimaculata* H.-S., with *trimaculata* Bdv. as synonym. The identification of *grotei* and *flavilinguis* with *creescens* is correct, as I have previously pointed out (Can. Ent. June, 1892), and I am inclined to believe that the other names also refer to the same species, and that *bimaculata* H.-S. must be used to indicate our form as is done in my Check List.

To *Androloma*, which is given generic rank, are referred the *Alypia lorquinii*, *maccullochi*, *ridingsii*, *similis* and *brannani* of my list. The genus *Fenaria* is used for *sevorsa* Grt., and *Phægorista* (not *Phægarista*, as I have it) is placed in the Nyctemeridæ, a widely separated family. *Euthisanotia* Hüb. is used in the sense that we use *Eudryas*, and *unio* is given as type of the genus. I am not prepared to assent to this decision without more investigation. I am inclined to believe that Boisduval's name *Eudryas* can be rescued for use as in our lists. The use of the other generic terms accords with our own. *Metagarista* ? *sabulosa* Bdv., illustrated in Felder Lep. iv, t. 107, fig. 11, is credited to California. I do not know the species.

Neither the Chalcosiidæ, nor the Thymaridæ are credited with species from our fauna.

The term Zygaenidæ is used in the widest possible sense, except that the Agaristidæ included by Mr. Grote are here excluded, and one hundred and sixty-five genera are accredited to the family. It would be difficult, indeed, to get a definition of this assemblage with-

out including also one-third of the other families of Lepidoptera. Nine subfamilies are, however, recognized, which may be taken up in order.

In the first subfamily, the Anthroceridæ, no species from our fauna are listed. In the Adscitinæ we find Mr. Hy. Edwards' species, *Penthetria*, under the name *Tantura*, the former genus being marked pre-occupied. I am very doubtful, indeed, whether our species are near enough to *Adscita*, as *Ino* Leach is here termed, to belong to the same family, but I agree with Mr. Kirby in giving at least a subfamily rank to the differences between *Ino* (*Adscita*) and *Zygæna*. I have elsewhere pointed out an essential difference in the venation between these forms. In the appendix *Thia extranea* Hy. Edw. is referred to this subfamily. In the Zygæninæ no species are credited to our fauna, nor are there any in the Thyratinæ or Phaudinæ.

To the Pyromorphinæ, Acoloithus, Harrisina, Triprocris, Pyromorpha, Lycomorpha and Anatolmis are referred; though I have pointed out that there are essential differences between *Anatolmis* and *Lycomorpha* and the other genera with which they are associated by Mr. Kirby. With these two genera excluded Mr. Kirby includes of our fauna the species ranged under the term Pyromorphidæ in my list. *Triprocris aversus* Hy. Edw. is erroneously recorded as from Arizona, whereas it was described from Jalapa, Mexico. *Lycomorpha rata* belongs to *Pyromorpha* as referred in my list.

The Euchromiinæ contain the largest series in the "Zygænidæ," and of our species has *Syntomeida ipomeæ* Harr., using this generic term instead of *Euchromia*, and citing *ferox* Wlk., and *euterpe* H.-S. as synonyms; *Dahana atripennis*; *Phyllæcia* (Guér.) *texanus* for *Horama texana*; *Erruca pertyi*, *Didasys belæ* and *Cosmosoma auge* Linn. (= *omphale* Hüb.). *Burtia rubella* from Cuba, so close to *Didasys belæ* that they seem like the same species, and are certainly identical generically, is placed in the Trichurinæ under Herrich-Schaeffer's name *Gundlachia*. *Syntomeida epilais* is not credited to Florida, though well recorded thence.

Neither the Trichurinæ nor the Antichlorinæ are represented in our fauna.

The Arctiidæ are ranged in six subfamilies and two hundred and thirty-one genera, introducing a great many changes in the accepted nomenclature.

In the Charideinæ, containing thirty-eight genera and many species, our own fauna is represented only by *Nelphe carolina* Hy. Edw.

and the species of *Scepsis*. Whether *N. carolina* agrees with the other species of *Nelphe* or not I cannot say; it is certain, however, that it has no family relationship with *Scepsis*. Why this latter genus is disassociated from *Ctenucha* is a puzzle to me, in all details of structure they are closely related, and only the wing form differs. *Sc. packardii* is referred as a synonym of *Sc. fulvicollis*, perhaps correctly.

The Ctenuchinæ are all American, and a fair proportion from our fauna. *Ct. venosa* Wlk. is referred to *Philoros*, and is type of the genus. *Ct. virginica* is type of *Ctenucha*, and has associated with it only one other species. *Ct. cressonana* is referred to *Compsoprium* Blanch. To *Euctenucha* are referred *ochroscapus*, *multifaria*, *rubroscapus*, *sanguinaria* and *brunnea* of our species, while in *Pygoctenucha* we find *robinsonii*, *funera* and *harrisii*, the latter of these the type of the genus. There is room for a difference of opinion at least on the question of the necessity for so many genera for so few species.

The Pericopinæ, again, are very poorly represented from our fauna. The species of *Gnophæla* are arranged somewhat differently from the accepted method. *Hopfferi* is made a synonym of *latipennis* Bdv., while *discreta* is given specific rank, and *arizonæ* is cited as a synonym. The validity of this synonymy is at least open to question. *Daritis* and *Composia* are the only other genera represented in our fauna, each by a single species only. *C. fidellissima* is not credited to our fauna, though both Mr. Dyar and Prof. French have recorded it. In my Check List it appears among the Agariistidæ; probably an error.

In the Phægoterinae we find, first, *Alexicles aspersa* Grt., which is unknown to me, *Eupseudosoma floridum*, *Lophocampa* with *caryæ* as type, and *agassizii*, *maculata*, *argentata*, *sobrina*, *scapularis*, *ingens*, *occidentalis* and *subalpina* as other species; *Euhalisidota*, *Halisidota* with *tesselaris* as type, and *davisii*, *labecula*, *edwardsii*, *cinctipes*, *minima*, *trigona*, *cinnamomea*, *significans* and *ambigua*, as other species.

In *Lophocampa*, *agassizii* is given as distinct from *maculata*, with *californica*, *angulifera* and *salicis* as synonyms; *fulvoflava* and *guttipera* are cited as synonyms to *maculata*; otherwise, no changes are made. In *Halisidota* we find *trigona* Grt., but *specularis* H. S., which resembles it so closely that it has been considered identical, does not appear in the genus; so of *H. roseata* Wlk., which has been cited as a synonym of *cinnamomea*. *Cinctipes* Grt. is not credited to our fauna, though it has been well recorded from it.

Under *Ecpantheria* we find *sennetii* Lint., then *cæca* Strk., our old friend *scribonia* under the name *ocularia* Fab., *eunigunda* being awarded specific rank, and *reducta* Grt.; *cæca* Streck. and *reducta* Grt. have long since been referred as synonyms of *Leucartia permaculata*, which is in truth an *Ecpantheria*, though it does not appear in Mr. Kirby's list.

Halisidota roseata reappears as a species under *Æmelia*, widely separated from *H. cinnamomea* Bdv., and we are again at sea as to what was intended by these specific names.

Under *Arachnis* we find *zuni* credited to Mr. Schaus, while Mr. Neumoegen is entitled to the honor.

Subfamily V, the Spilosomatinae, shows, as the first familiar name, *Antarctia*, to which none of our species are referred. In the appendix, however, *A. beanii* Neum. appears.

Under *Estigmene* Hüb. we find *acræa* as type, and *permaculata*, *albida* and ? *niobe* Strk. as other species. *Spilosoma nigroflava* Graef., is cited as a synonym to *E. permaculata*, to which it has not the slightest resemblance. *E. niobe* Strk. has been referred to *Seiractia echo*. *E. permaculata* Pack. is an *Ecpantheria*, as has been already stated. *Cyenia dubia* Wlk., appears here as an *Estigmene*; Messrs. Grote and Robinson, from an examination of the type, referred it to *Phragmatobia*.

Spilosoma is unchanged. In *Hyphantria* we have *cunea*, *textor* and *punctata* as good species, though their identity has been proved to demonstration time and again. *Spilosoma congrua* Wlk. correctly appears as a synonym of *H. cunea*. Why Mr. Kirby restored these specific terms when there is practical unanimity among American students in referring them to the synonymy, puzzles me.

Ectypia bivittata should have *Spilosoma nigroflava* as a synonym. *Euerythra*, wrongly written in the body of the work, is corrected in the appendix.

Cyenia Hüb. is used for most of our species of *Euchætes*, and *C. tenera* Hüb., from the "Southern States," is named as type. We find also *C. budea* Hüb. as from the same locality. I am not aware that either *tenera* or *budea* are known in our collections. In *Pareuchætes* we find *cadaverosa*, *affinis* and *conspicua*. If the genus is a good one, other species must be referred to it. *Vanessodes* is sandwiched in here, though it has little resemblance to those of the surrounding forms that are known to me. *Seiractia* is unchanged, and so is *Pyrhractia*, which ends the subfamily.

The subfamily Arctiinae begins with *Codiosoma*, as Mr. Kirby writes Mr. Stretch's generic term *Kodiosoma*. *Phragmatobia* follows immediately after, and contains, besides *fuliginosa* and *rubricosa*, the species we have as *Antarctia* in our list. I confess this aggregation is staggering, when the separations elsewhere made are taken into consideration. *P. assimilans* is cited as a synonym of *rubricosa*, and *franconia* is cited as a variety of the latter, probably quite correctly. *P. (Antarctia) vagans* Bdv. has *rufula* cited as a synonym—quite correctly in my opinion; but *walsinghami* has no better claim to specific rank, and is yet passed.

Parasemia Hüb. is used instead of *Nemeophila*, with *plantaginis* as type. *Geometrica* is cited as distinct from *petrosa* contrary to the opinions of all American entomologists; even its describer, Mr. Grote, placing it as a variety as far back as 1889.

Haploa Hüb. is used for our American species referred to *Callimorpha*, the synonymy practically agreed upon by Mr. Lyman and myself being mostly rejected and nearly all the names given specific rank. Whether Mr. Kirby deems our work inconclusive or unreliable does not appear. The only point he decides is that *C. lactata* Smith drops in as a synonym of *Tanada conscita*, and that perhaps may be conceded as correct.

Under *Callimorpha*, Mr. Kirby gives us our *Epicallia virginalis*, making it congeneric with *C. dominula* L., the type of the genus. In *Platartia*, *parthenos* and *borealis* appear as distinct species, and *hyperborea* Curtis, to which both have been referred as synonyms, does not appear in the genus at all. *Yarrowi* and *remissa* also are referred to this genus.

Under *Hypercompa* Hüb. we find our *Euprepia caja* and *opulenta*. Mr. Kirby here gives the Tentamen priority over Ochsenheimer's name. My opinion of the Tentamen has been elsewhere expressed, and I cannot follow Mr. Kirby here.

Under *Arctia* we have *villica* as type, and one other species, none of our American forms being accredited to the genus.

In *Hyphoraia* Hüb. we find our *Platartia hyperborea*, its supposed synonyms *parthenos* and *borealis* having been long ago disposed of.

After an interval of foreign generic names we find *Apantesis* Wlk., to which most of the *Arctia* species of our list are referred: such as are not so found will be hereafter mentioned. *Arctia parthenice* is given specific rank and widely separated from *saundersii*, of which it is, I believe, a synonym; indeed, the order of species here adopted

is entirely unnatural, and without any base discoverable by me. *Stretchii* is separated by *shastaensis* from *intermedia*, of which it has been referred a synonym. *Shastaensis*, by the bye, is credited to French instead of Behr., and quite correctly, for the characterization is by French, and the use of a mss. name suggested by another does not change the authorship. Other departures from well-established synonymy are numerous, and Mr. Kirby seems to have been quite arbitrary in his recognition or rejection of species. All of Mr. Butler's names, baseless as most of them are, stand of course, since the types are in the British Museum, but why *anna* and *persephone* should be kept distinct when no American entomologist disputes their specific identity is puzzling, especially when *nevadensis* and *incorrupta*, which are related in much the same way, are classed as varieties.

Under *Orodemnias* we find *quenselii* with *gelida* as synonym, *speciosa* as a good species, *obliterata* and *cervinoides*. In *Callarctia* we have *ornata*, *proxima*, *favorita* and *arizonensis*. Under *proxima*, which is not credited to our fauna, we find *docta*, *mexicana* and *anthoela*, as synonyms, correctly enough; *arizonensis* should have been added.

In *Leptarctia* the names are arranged according to French and Butler.

Family IX, the Cymbidæ, contains only one familiar name—*Earias obliquata* Hy. Edw. It seems to be the only species in the family recorded from the New World, and the correctness of the generic reference may bear investigation.

Family X is the Lithosiidæ, with 228 genera not divided into sub-families. The first familiar name is genus 11, *Hypoprepia*, under which our species are arranged as we are accustomed to see them. Genus 12, *Cisthene*, contains all the names proposed for our forms, and specific rank is accorded to all. Genus 13, *Pyralidia*, replaces *Byssophaga*, as used in our lists, and *deserta* Felder, from Utah, is named as type. I do not know this species and question its distinctness from our other named forms.

Genus 14 is *Hyaloscotes* for *fumosa* Butler, and then there is a long array of genera without a familiar name until 92, *Lithosia*, is reached. Here we find *argillacea* with *bicolor* as synonym, and *rubropicta*. Why *argillacea* is preferred to *bicolor* does not appear: both names were proposed in the same volume of the same publication, but *bicolor* has, according to Mr. Kirby, twenty-four pages the priority,

and is yet ranked as a synonym. In genus 122, *Crambidia*, we recognize another acquaintance, and under it are *pallida* as type, and *Lithosia candida*, *casta* and *cephalica* as other species. Genus 126 is *Eustixia* Hüb., with *pupula* as type and sole species. This is undoubtedly a Pyralid, and has been so referred by Prof. Fernald in the recent Check List. Genus 144 is *Coscinia* Hüb., and among others we find our *Emydia ampla* under this generic name. *Uteth-eisa* is genus 147, containing among others our species *ornatrix*, *bella*, *venusta* and *pulchella*, all as good species; *venusta* Dalm. is an older name for *speciosa*; so Mr. Kirby says. Under *Eubaphe* Hüb., genus 163, we find our species of *Crocota*, in which little change is ventured. Genus 166, *Eudule* Hüb., contains our *Ameria texana* and *unicolor*, and *Crocota immaculata* Reak. Genus 179 is *Pagara* Wlk., with *simplex* as type, and *murina* as synonym. I have shown, "Canadian Entomologist," xxiv, 134, that these are the same as *Vanessodes clarus* G. & R., which Mr. Kirby makes genus 160 in the Arctiidae, placing it next to *Euchaetes*. The present location is much the better. Mr. Kirby is certainly in error in citing *simplex* as the type of the genus; *venosa* was first described under the name, and *simplex* under another name is the type of *Comacla*. If *venosa* is really congeneric with the others, it makes no difference which is selected, otherwise *Comacla* has the right to recognition. Genus 182 is written *Euphaussa*, and contains our species and two others. *Clemensia* is genus 190, and contains our species and one other from Brazil. Under *Nycteola* we have our species referred to *Sarrothripa*. I think that these species are certainly entitled to family rank; there is more difference structurally between *Nycteola* and *Lithosia* than between the latter and *Arctia*. *Eulithosia* Hy. Edw., genus 199, is a Noctuid, as I have shown. To *Nola* 72 species are referred, among which the four names credited to our fauna make a poor showing. In *Argyrophyes*, however, we have two of the three species, and under *Lebena*, genus 210, we find our *Nola trinotata*, *minna*, *sorghielli* and *melanopa*. To the remaining genera no American species are referred.

Family XI, the Hypsidæ, family XII, the Callidulidæ, and family XIII, the Cyllopodidæ are not represented in our fauna.

In Family XIV, the Dioptidæ, *Phryganidia californica* is the only species from our fauna.

Family XV, the Nyctemeridæ, are altogether unrepresented.

Family XVI, the Liparidæ, contains 180 genera, among which

American forms are sparsely represented. The first genus credited to the United States is number 9, *Cingilia* Wlk., with *humeralis* Wlk., as sole species and type. This is one of those unfortunate overlooked species that has never made its way into our lists; what it may be is unknown to me. In genus 22, *Carama*, we are represented by *cretata* Grt. So in genus 61, *Artaxa*, we are credited with one species out of 61, and even this has a ? after the generic name, as if to question its right here. As there seem to be no other species known from the New World, perhaps the ? is justified.

In *Parogyia*, genus 110, we make a better showing with eight species out of sixteen described. Mr. Kirby credits *basilflava* Pack., to locality "Nonantum." It would puzzle some of our foreign friends to know where this place was if the name of the describer and place of description did not suggest the United States as the probable location. Apropos of this it may be noted that Mr. Kirby often gives for our American species only the localities given in the original description, so that as a guide to distribution within our fauna the catalogue is of little value. Thus under *Lagoa*, genus 113, *pyxidifera* and *opercularis* are credited to Georgia only, and *crispata* to Massachusetts only. Under genus 135, *Dasychira*, we have *rossii*, *grœnlandica* and *lintneri* from our fauna. *Demas diversicolor* Morr. and *D. flavicornis* Smith appear under *Colocasia* Ochs. Mr. Morrison's species has long since been referred to *Hadena*, while my species is certainly a Noctuid, and is congeneric with *coryli*. *Nerice* Wlk., genus 147, also figures as a *Liparid* here. *Cothocida nigriifera* Wlk., genus 154, is a *Crocota*, as I have shown. In genus 157, *Hypogymna morio*, is credited to Europe and America, without specifying North or South. It is not known to me from our faunal region.

Our species of *Orgyia* reappear in genus 164, under the term *Notolophus* Germ., with *antiquus* as the type, *O. fascelina* being made the type of Ochseneheimer's genus, to which we have nothing to refer, generically. Mr. Edwards' *obliviosa* appears as *olivacea* and a var. of *leucographus* Geyer.

In family XVII, the Heterogynidæ, we are not credited with any species, and the entire family contains only one genus with three species.

Family XVIII is the Psychidæ, with 49 genera. Genus 2 is *Oiketicus*, in which we have two species. Genus 3 is *Thyridopteryx*, in which also we have two species. Under genus 8, *Manatha* Moore, we find *M. edwardsii* Heyl., from Texas; a name heretofore unknown

to me as the species is at present. We also find under genus 25, *Chalia rileyi* Heyl., also from Texas, and equally unknown to me. *Psyche* is genus 32, and under this our four species form just one-fifth of the whole. *Plataceticus* is genus 33, with *gloveri* as type, and one other species. For *Eutheca mora* Grt., accidentally omitted from my list, *Sapinella*, genus 45, is proposed, Mr. Grote's name being preoccupied, and the same fate befalls *Pseudopsyche* Hy. Edw., for which we get *Ædonia* Kirby. The genera *Lacosoma* Grt., and *Perophora* Harris, are referred to the Drepanulidæ by Mr. Kirby; perhaps incorrectly.

Family XIX is the Limacodidæ, with 106 genera. Not till we get to genus 33 do we strike a familiar name, and then we find *Limacodes beutenmulleri* Hy. Edw., under *Semyra* Wlk. Genus *Phobetrum* Pack., or *Phobetron* Hüb., as under the rules it should be written, contains *pithecium*, *hyalinum*, *nigricans* and *tetradactylus*; all, save the first, long since placed in the synonymy. Genus 10, *Adoneta*, contains our species only. Under *Eulimacodes* we find *scapha* Harr. *Nochelia* and *Empretia* are genera 52 and 53, respectively, each with the single type species only. Under *Sibine* H.-S. we find referred with a ? the *Limacodes ephippiatus* of the Harris correspondence. This is obviously *Empretia stimulea*, and very well characterized; but I have no memorandum that it has ever been definitely referred into the synonymy. *Parasa* is genus 67, and contains 54 species, only two of them from our fauna. *Varina ornata*, which follows next after, has been removed from this family by Mr. Dyar, whose recent papers on this family Mr. Kirby has used in the appendix to supplement his text. *Euclea* and *Monoleuca* are genera 69 and 70, respectively. Under *Euclea* we find *viridiclava* Walk., from Massachusetts—a name unfamiliar to our lists. Referring to Walker's description we find that no locality was there given, except a ?, and perhaps the Massachusetts locality by Mr. Kirby is an error. *Isa* Pack. is said to be preoccupied, and *Sosiosa* Kirby is proposed to replace it. Next after this comes *Tortricidia*, in which *flavula* and *pallida* are given specific rank, and to which the undetermined *Limacodes ferrigera* Wlk. is added. *Kronea* is genus 82, and contains our species only. Our species of *Limacodes* appear under *Apoda* Haw., and *Limacodes* is made a synonym and not used for any aggregation of species. Whether under such conditions we can use the family term Limacodidæ, there being no genus *Limacodes*, is perhaps a question. Personally, I would regret the change, as I regret the

change from the well and universally known *Limacodes* to *Apoda*. Several of the species under the typical name in our lists are elsewhere referred; but no synonymical changes appear. *Sisyrosea* (wrongly written *Sicyrosea*) contains the species *inornata*, *nasoni* and *rude*. It has been shown that *inornata* is the type of *Isa*, and not *textula* H.-S., though as the name is preoccupied, Mr. Kirby's solution may be accepted. *Rude* has been referred as a synonym of *nasoni*. Under *Packardia*, genus 90, *ocellata* and *nigopunctata* appear as good species, though they have been referred to the synonymy. Under *Lithacodes* we have *fasciola*, *lati-clavia* and *rectilinea*, referred to *Limcodes* in my list, and *flexuosa*, *cæsonia* and *græfii*, there referred to *Heterogenea*. The generic reference in my list may be incorrect, but *græfii* and *flexuosa* have been referred as synonyms of *textula* H.-S. Under *Heterogenea*, *shurtleffii* appears as sole American species. If it is really the same as *cæsonia*, and the latter is really a *Lithacodes*, this leaves us no representative of this old world genus.

Family XX, the Notodontidæ contains 202 genera. Genus 12, *Litodonta*, with *hydromeli* as type and sole species, is the first name in our lists. *Heterocampa* follows, containing our species with two exceptions, elsewhere referred to. *H. trouvelotii* is given specific rank, though it has been referred as a variety of *obliqua*, and *marina*, also given as a species, has been placed as a synonym of *unicolor*. Under *Edemasia* we have the species usually in our lists, and in addition the *Dryocampa riversii* Behr. and *Edema semirufescens* Wlk. The latter was referred to *Schizura unicornis* many years ago by Grote and Robinson, as I believe, correctly. *Schizura* is genus 23, and contains all our American species; *humilis* and *edmandsii* having specific rank, though they have been referred as synonyms to *unicornis*. Genus 25, *Saligena* Wlk., with its single species *personata*, has been long ago referred as a synonym of *Raphia frater* Grt. *Seirodonta* follows, and contains only the typical species. *Hatima* Wlk., is next, with *semirufescens* Wlk. as type, and *Dasylophia anguina* and *interna* as other species. I have, from an examination of the type, referred (Can. Ent. xxiv, 35) *H. semirufescens* to *Schizura unicornis* and the species of *Dasylophia* are certainly not congeneric. By a *lapsus calami* I wrote the name *Hatuna* in my original note and so it was printed. *Dasylophia* must assuredly be restored. *Ianassa lignicolor* is type of its genus, and *Edema transversata* is referred to it as a synonym. I have examined the type and have referred it to *Ellida gelida* Grt. in Can. Ent. xxiv, 135. Genus *Symmerista* Hüb.

is number 34, and has as type *S. albicosta* Hüb. This species was figured by Hübner as European, and was said by Treitschke, v, 2, 167, to be *albifrons* H.-S., with an erroneous locality. Mr. Dyar seems to think it a good species, and that it may not even be congeneric with *albifrons*. I do not know it. *Edema* contains of American species, besides those in our list, *obliqua* Wlk., and *plagiata* Wlk. The former has been placed in the synonymy among the Noctuidæ; the latter was referred to *Parorgyia* by Messrs. Grote and Robinson from an examination of the type. Genus 41 is *Stretchia* Hy. Edw., with *plusiiformis* as sole species and type. As far back as 1882, Mr. Grote referred this genus to the Noctuidæ and as a synonym of *Perigrapha*. *Acherdoa* (not *Acherdes*, as Mr. Kirby writes) *ferraria* has been referred as identical with *Varina ornata* Neum. (Can. Ent. xxiv, 135), and is surely not a *Notodontid*. It is pleasant to find Mr. Kirby wrong and myself right in transcribing, once in a while; the boot is too often on the other leg. I realize too well the absolute impossibility of getting so vast a body of names rightly written, to make it a subject of criticism. *Certila flexuosa* I do not know; it is one of the undetermined Walker species. *Hyparpax*, genus 82, contains our species only. *Psaphidia* Wlk., with *resumens* as sole species and type, is a noctuid. My catalogue of this family is in the printer's hands and I cannot say from recollection what species it is a synonym of. In *Cerura*, *cineroides* and *candida* are both given specific rank, and *bicuspis* is not credited to America. Under *Panthea* we find *leucomelena* Morr., which has been for many years recognized as a synonym of *Audela acronyctoides* Wlk., and so appears in Mr. Grote's list of 1882. The genus is certainly noctuid, by the bye, and we have a number of species fully referable to it. In *Glyphisia*, all our species appear as listed; *tearlui* has been referred to *Bombycia* long since and *septentrionalis* Wlk., here given specific rank, has been referred, though with a ? to *trilineata* by Mr. Grote. *Thaumetopœa* Hüb. replaces *Cnethocampa* Steph., and here we find *grisea* Neum. *Ellida gelida* Grt. appears under genus 117; as already stated, *transversata* Walk. must replace the specific name. Under *Notodonta* we have *stragula*, *basitriens*, *simplaria*, *plagiata* and *notaria* of our species. The latter has been referred to *Lophopteryx elegans* Strk. *Lophodonta* contains only the species of our list. *Ochrostigma* Hüb. replaces *Drynobia* Dup., and *tortuosa* Tepp. appears under that name. Under *Lophopteryx* our two species appear, and to *elegans* Strk., var. *a*, *orissa* Strk., is added. No change ap-

pears in *Pheosia*. *Melanopha* Hüb., Tentamen, replaces *Ichthyura* Hüb., Verzeichniss, and under that name our species are listed. *Palla* is given specific rank, and so is *indentata*, else no change is made in our species. *Apicalis* is credited to Walker instead of to Barnston, and Mr. Kirby has consistently so credited all the species described by Walker from Barnston's catalogue names; correctly so in my opinion. In *Datana*, genus 153, no change is made, and the genus contains our species only. *Nadata* contains three species beside those from our fauna; all Asiatic. No American species of *Nystalea* appears, though Mr. Grote has described an *N. indianæ* referring it to the Noctuidæ near *Cucullia*. From a casual examination of the type it is much nearer to *Bombycia*. As an ending to the family there appear 23 genera described by Walker, all save one with a single species only, and all either from Brazil or Sarawak. Whether they are all so intimately related, or whether Mr. Kirby found it impossible to place them more definitely does not appear.

As Family XXI, appear the Sphingidæ sandwiched in between the Notodontidæ and Bombycidæ. This is quite out of the accepted course, but I am not prepared to say that it is indefensible. The question of arrangement offers so many opportunities for individual judgment, as it is universally admitted that no linear arrangement can truly express all relationships, that almost any arrangement can be defended; six subfamilies with 116 genera are recognized. At the head come Macroglossinæ with *Hemaris* Dalm. as first genus. All our species are included under this term and nearly all the names are given specific rank. As to some of the forms where the synonymy is in dispute, this course was perhaps the safest, but in other cases I do not understand why Mr. Kirby ignored the conclusions reached in my monograph of the American species. Under *Lepisesia* only *flavofasciata* and *ulalume* are included. I have shown that it is much wider in its application in our fauna. Under *Aellopos*, neither *tantalus* nor *fadus* are credited to our fauna. *Euproserpinus* is used for *phaeton* and *euterpe*, and *Dieneces* Butler for *clarkia* and *circæ*. Why eight genera, quite different in structural characters, should be placed between these genera and *Lepisesia*, is a mystery to me. Under *Perigonia* we find *tacita* Druce, from the United States. It is unknown to me. *Thyreus* is marked preoccupied, and *Sphecodina* Blanch. is used instead, with *abbotti* as type. *Amphionessus* and *Deidamia inscriptum* are both monotypic from our fauna. *Gauræ* and *Juanita* appear in *Pterogon*. I have shown that the

genera last cited (except *Pterogon*) are structurally distinct from the typical Macroglossinæ, and that they cannot remain united with it. *Unzela japix* is credited to America simply. I am not aware that it occurs in our fauna. *Triptogon* is used for *Enyo*, marked preoccupied, and neither *lugubris* nor *camertus* are credited to our fauna.

The Chærocampinæ are Subfamily II. *Theretra* Hüb. is used for *Chærocampa*, and out of 115 species our fauna is credited with two only, and one of these—*procne*, does not belong to us. *Deilephila* contains two species from our fauna, and one of these is *galii*, var. *intermedia* Kirby, to which *chamænerii* is cited as synonym; probably correctly. *Dupo* Hüb. is used for *vitis*, *linnei* and *typhon*, while in *Philampelus* we find *pandorus*, and in *Pholus*, *achemon*. This is certainly extreme, for, while we may admit difference between *Dupo* and *Philampelus*, *achemon* and *pandorus* are so closely allied in all stages that generic separation becomes simply absurd. Carried out consistently on the same basis it would be almost impossible to get more than two or three species into any genus. *Argeus labruscæ* is not credited to our fauna, though it has been in our lists for years. To *Darapsa* is referred *versicolor* Harr. *Ampelophaga* is confined to Asiatic species, and *chærilus* and *myron* appear in *Everyx*.

Subfamily III is the Ambulicinæ, in which we find *Pachylia* Wlk. *P. ficus* is not credited to our fauna, but *P. lyncea* Clem., from Texas, appears as a good species.

Subfamily IV, the Sphinginæ, begins with *Diludia*, which contains *brontes* as sole species from our fauna. *Daremma* contains *undulosa* as type, *hagenii* and *catalpæ*, all from our fauna. Mr. Kirby does not seem to have recognized the close affinity between these species and *amyntor*, for he places the latter 14 genera further on. *Dolba* has our species as type, and one other from Mexico. *Cocytius* Hüb., Verzeichniss, has *antæus* as type, *Amphonyx* sinking into the synonymy. The species is not credited to our fauna. Under *Phlegethontius* we find *sexta* Joh. as type, and this is our *Sph. carolina*. As other species we have *rustica*, credited to America simply; *dalica*, credited to Canada, and which has been referred as a form of *rustica*; *lycopersici*, which has been referred to *carolina*; *quinquemaculata* and *cingulata*, var. *decolorata*. Under *Sphinx*, *oreodaphne* is given specific rank, *leucophaea* is credited to Texas, *lugens* is not credited to our fauna, *andromedæ* is marked from Georgia to Honduras, as a good species, *utahensis* is given specific rank, *vashti*, *vancouverensis* and *albescens* are all made good species, and we find a *S.?* *capreolus*

Schaufl., from Vermont! *Gargantua*, with *eremitus* as type, is proposed for that species, *eremitoides*, *gordius* and *luscitiosa*. Mr. Kirby seems to have overlooked the fact that Mr. Grote, ten years ago and more, referred Mr. Strecker's species to *lugens*. Under *Hyloicus* we find *saniptri* Strk. as a distinct species; *plebeia*, *dollii*, *coloradus*, *sequoia*, *strobi* and *cupressi*. Under *Lapara* we still have *bombycoides* Wlk. as sole species and type. *Chlænogramma* has *jasminearum* as type and only species, and *Ceratomia*, with *amyntor*, is in the same case. *Ellema* contains our species only, and *Exedrium* has still only one species. *Dilophonota ello*, *cenotrus*, *melancholica* and *merianæ*, are all credited to America simply, though they are mostly confined to a very limited part of it. *Obscura* on the other hand, though it occurs in our fauna, is credited only to Mexico and the Antilles. Under *Cantethia* we have *grotei* only, and under *Anceryx* only *edwardsii*.

The Manducinae, Subfamily V, contains only *Manduca* Hüb., Tentamen, which replaces *Acherontia* Ochs., and this is unrepresented in our fauna.

Subfamily VI is the Smerinthinae. *Marumba* Moore is used in place of *Triptogon*, marked preoccupied, and we are given three species: *modesta*, *imperator* and *cablei*. The latter "species" one would suppose had certainly not a leg to stand upon, and why Mr. Kirby gives it unquestioned specific rank here is inexplicable to me. Under *Smerinthus* we have *vancouverensis* and *ophthalmicus*, while under *Eusmerinthus* we have *cerisii* and *astarte*, though I have shown that they are all but geographical races of one species. *Geminatus* is given as distinct from *Jamaicensis* under the same generic term, and here, too, we find *myops*, a species which I have shown to be structurally distinct. In *Paonias* we have *excæcata* as type, and *pavonina* Geyer as other species. To *Calasymphobolus*, *astylus* is referred as type, and one other species, *oculata*, from Mexico, is given a place here with a ?. In *Cressonia* we find *juglandis*, *hyperbola*, *robinsonii* and *pallens*, all as good species. Finally, tailing off the list, we have *Arctonotus lucidus*. After such an review of the Sphingidæ, a sort of helpless feeling predominates. Is there any use of writing monographs, lists or synopses when they seem to be unused or regarded as of no avail by such men as Mr. Kirby? To say nothing of the almost entire disregard of nearly all the original synonymy proposed by me in my monograph of the family, even old, accepted synonyms, established by Mr. Grote are not adopted in all cases.

Not even for localities are our lists used, much less are our other publications referred to in matters of distribution. Demonstrations of structural identity or differences go for nothing. The races of *Smerinthus cerysi* are separated generically, while species very different in structure are associated.

To the Bombycidae, Family XXII, only 28 genera are referred, and the first of these, represented in our fauna, is *Bombyx* with *mori* as type. I am glad Mr. Kirby has so typified the old Linnaean genus. The only other species from our fauna is *Thauma ribis* Hy. Edw., only species of the genus.

Family XXIII, the Drepanulidæ, contains 31 genera, 17, or more than half of them, monotypic. *Perophora*, with 25 species, is referred here, our fauna credited with one name only, which, however, typifies the genus. *Oreta* Wlk., supplants *Dryopteris* Grt., and our species are here listed: *marginata* is here given as a synonym of *rosea*, instead of a variety, as it stands in our lists. *Lacosoma*, with *chiridota* as type and only species, is also referred here. Under *Platypteryx*, our species appear without change, save that *fasciata* Steph. is referred to "N. Amer.?"; it is quite likely that the ? is justified. The *Prionia bilineata* of our lists reappears here in *Falcaria* Haw., and that ends our representation in the family. Scanning the association here made, rather closely, leaves it an open question whether superficial resemblances rather than structural characters have not been too much controlling.

Next follows the family Ceratocampidæ, and in *Anisota*, which heads the series, we find our three species unchanged, two of them referred from Georgia only, the third from America. *Dryocampa* follows, with *rubicunda* as type, and six other species from Central and South America. *Sphingicampa* contains our species only, and var. *immaculata* Jewett is missing. *Quadrilineata* and *albolineata* by the bye, are credited to Mexico only. *Citheronia* Hüb. and *Eacles* Hüb. are united, and our species otherwise are unchanged. *Coloradia* ends the series. Omitting the last, the family is a sharply limited one. I confess that I would have hesitated about uniting *Eacles* and *Citheronia*, but am not prepared to say the union is not justifiable. It is only surprising to find it made by Mr. Kirby, who elsewhere finds no difficulty in separating much more nearly allied forms.

To Family XXV, the Saturniidae, 68 genera are referred. Under *Attacus* we find *cinctus*, from Arizona, and *erycina* Shaw, as doubt-

fully Texan. *Erycina* is an older name for *splendidus*, according to Mr. Kirby. Under *Philosamia*, used for a section of Hübner's *Samia*, we find *cynthia*, which is credited to Java only, though it has been on our lists for years. Mr. Kirby has in some other cases given only the original home of a species and not the localities in which it has been accidentally introduced or domesticated. *Samia* Hüb. is given *cecropia* as type, and *columbia*, *gloveri* and *californica* as other species. The last name justly replaces *ceanothi* Behr. In *Callosamia* we find *calleta*, *promethea* and *angulifera*. This separation of the species, which I have united under the term *Attacus*, is perhaps justifiable when the fauna of the world is considered, though I confess I rather doubt the possibility of sharp definitions for all of the generic terms. Under *Telea* we have *polyphemus* as sole species and type. *Luna* appears under *Tropæa*, and next to it we find *T. rossi* Ross, from Toronto. It is extremely unlikely that this name refers to a distinct species. I have not seen the "Cat. Lep. Can. p. 5, note (1872)," where it is said to be described. Under *Saturnia* we find our *galbina*, but it is credited to Mexico only. *Calosaturnia*, with *mendocino* as sole species and type, is separated from it by six foreign genera. *Automeris* Hüb., is used to replace *Hyperchiria* for 77 species, among which our few American names are scattered. *Lillith* Strck. is given specific rank. Of *Hyperchiria*, proper, we have no species. *Hemileuca* is an American genus, and all but four of the species belong to our fauna. *Nevadensis* is given specific rank, and *hualapai*, *tricolor* and *sororius*, are referred to *Euleucophaeus*. *E. neumogeni* is referred to *Argyroges*. In *Pseudohazis*, *nuttali* is given specific rank; *pica* is made a synonym of *hera* instead of a variety of *eglanterina*, and *marcata* is made a variety of *eglanterina* instead of *hera*, as its describer thought. It is to be regretted that Mr. Kirby did not accept my limitation of the Saturniidae to those forms in which the antennæ have two branches or pectinations to each joint. If structural characters are to be regarded as having any value at all in the Lepidoptera, this character is certainly as strong a one as occurs in the order.

Family XXVI is the Lasiocampidae, with 148 genera. Not until we reach genus 85 do we find any familiar names, and then, under *Phyllodesma* Hüb. we find the species we have as *Gastropacha* in our lists. *G. occidentis* Wlk. is here referred as a synonym of *americana*, which I am willing to accept as correct. *Roseata* Stretch is used instead of *mildei* Stretch, and here I cannot follow Mr. Kirby. On

plate iv, fig. 12, of Mr. Stretch's work, a species is figured which, in the sheet of explanations, is called *G. roseata* N. S. No such species is described, but on p. 113 is described, at length, *G. mildei*, and, after the name, the reference is to Pl. iv, fig. 12. There is no sort of doubt that Mr. Stretch intended *mildei* as the name of the species, and that *roseata* was a mere tentative term unfortunately used in the explanations. I do not think that this constitutes such a characterization of the species as will prevent an author's changing the name in the first description, even though the plate is issued a month before the part containing the description appears. *P. alascensis* Stretch also appears in the list. Mr. Stretch never described any such species if his language is to be trusted. In comparing his *mildei* with allied species he speaks of *G. alascensis* Pack., and says his species is not "uniformly dark brown * * * etc.," quoting from some other publication. As a matter of fact, *alascensis* was never sanctioned by any description, and has no existing type. The name has no rightful place in any list. *Carpinifolia* Bdv. is also given as a synonym of *americana*, and Mr. Kirby thus goes further than any American author has yet done to my knowledge. To *Gloveria* are referred the species of our list and some Mexican forms. Genus 100 is *Heteropacha*, with *rileyana* as sole species and type. Under *Clisiocampa* no change has been made in our species. *Artace* has *punctistriga* as type, *rubripalpis* Feld. as variety, and *albicans* as other American species. By an error of date I was induced to give Felder's name priority in my list; it must be as Mr. Kirby has it. Our species of *Tolyte* are unchanged. *Apatelodes* appears in this family quite out of place; and finally we have *Acronyctodes insigninata* Hy. Edw. credited to Arizona. It was described from Mexico.

The Pinaridæ is a small family which is not represented in our fauna.

Family XXVIII is the Zeuseridæ, Mr. Kirby rejecting the term *Cossus* in favor of *Trypanus* Ramb., because *Cossus* had been previously used as a specific term. It is perhaps questionable whether this will be followed by lepidopterists generally. *Quadrina diazoma* heads the family, and *Trypanus* (*Cossus*) is genus 4. All the species of our list are found here, but some changes are introduced. *Cossus macmurtrici* Peale is written *macmurtrei* Guer., dating 1829. Peale is not cited, but I believe that 1857 is the date of his *opus*; which determination is correct, I do not know.

C. undosus Lint. is wrongly written *nodosus*. *Nanus* Strck. is re-

ferred to *Prionoxystus*. In *Hypopta* we find our species unchanged. *Prionoxystus* contains our species and *piger* from Cuba. *Cossula basalis* appears in genus 21, in the full glory of its synonymy, generic and specific. Under *Zeuzera* we find *canadensis* H.-S. and *decipiens* Kirby. The latter name has as synonym *Hepialus pyrinus* Fab., *Zeuzera pyrina* Wlk. and Machesney. Mr. Kirby seems to consider that our species is not the same as the European form, and therefore names it, giving N. America as the habitat. I believe that Mr. Kirby is mistaken. The insect has been carefully compared with European specimens by competent entomologists and has been declared identical with them. It is still so limited in distribution, and its history since its appearance here is so well known, that its recent introduction is a matter scarcely questionable. It would be interesting to have Mr. Kirby point out the differences between the species. It is curious that *Z. canadensis* should not have been rediscovered by the many good Canadian collectors, and it raises a suspicion that the locality may have been erroneously given.

Family XXIX is the Hepialidæ, and the last of the series. The typical genus heads the list, and contains a large proportion of our species. *Carnus* is not credited to our fauna, and Walker's identification of the species from Hudson's Bay Territory may easily have been incorrect. All the varieties in my list, save *montanus* Stretch, are here given specific rank. *Argenteomaculatus*, *argentatus*, *quadriguttatus*, *purpurascens* and *thule*, are referred to *Sthenopsis*, and in the other genera no species from our fauna appear.

In its entirety Mr. Kirby's work is worthy of the highest praise. I have noted no important omissions and very few errors of any kind. Mr. Kirby shows a remarkable acquaintance with entomological literature—an acquaintance in which no one who has not access to the vast wealth of the London libraries can hope to rival him. To the working entomologist the work is indispensable, and a very godsend. In typography and general get up, it leaves little to be desired. Mr. Kirby has apparently been at great pains to fix the types of genera, and in most cases his conclusions will have to be accepted. In the adoption of the Tentamen names I must decline to follow him; but I have long felt that many of the Verzeichniss names must come to be used in time. A serious fault in the work is, that it is not possible to learn from it what synonymy is original and what is adopted. As a guide to distribution, it is useless, except in the most limited way. No pretence to completeness

of bibliography is made, but a reference to faunal monographs of families or groups would have added greatly to the value of the work and would not have taken much more space. As authority for specific rank it must be very cautiously used, in our fauna at least. With the family groupings, or rather the grouping of genera into families I disagree entirely. No series of insects affords better opportunities for family divisions on structural characters than do the Bombyces, and, to our shame be it said, in no series is the classification so utterly superficial, so completely at variance with all scientific bases than just here where the work is easiest. I do not believe that more than half a dozen of the twenty-nine families accepted are capable of clean scientific definition. This is not Mr. Kirby's fault of course; it is, however, disappointing that the catalogue not only makes no advance in the matter of classification, but does not even accept sharply limited groups where they have been so well defined that recognition is easy. I realize, of course, that Mr. Kirby could not in all cases make even a good guess at the real location of some of the described forms; but this does not affect the criticism made, since the bad associations occur also among forms well represented in the British Museum.

To bring out somewhat more sharply the contrast between Mr. Kirby's work and the arrangement adopted in my recent list, which embodies the results attained by American students, I give in serial form the species credited to our fauna as they stand in the catalogue; while to show, in a measure, the proportion of our own forms to those of the world, I retain Mr. Kirby's numbering to families, genera and species.

Family I. CASTNIIDÆ.

Genus **MEGATHYMUS** Scudd.

1. *yuccæ** Bdv. Lec.
2. *cofaqui* Strk.
3. *neumoegeni* Hy. Edw.

Family II. COCYTIIDÆ.

Not represented.

Family III. URANIIDÆ.

Not represented.

Family IV. AGARISTIDÆ.

Genus 17. **PSEUDALYPIA** Hy. Edw.

1. *crotchii** Hy. Edw.
var. *atrata* Hy. Edw.

Genus 18. **ALYPIODES** Grt.

1. *creescens** Wlk.
Alypia grotei Bdv.
Alypiodes flavilinguis Grt.

Genus 19. **ANDROLOMA** Grt.

1. *lorquini** G. & R.
2. *maccullochii* Kirby.

* Indicates that the species is the type of the genus.

3. *ridingsii* Grt.
4. *similis* Stretch.
edwardsii Bdv.
var. *conjuncta* Hy. Edw.
5. *brannani* Stretch.

Genus 20. *ALYPIA* Hüb.

1. *octomaculata* Fab.
quadriguttalis Hüb.
Zygæna bimaculata Gmel.
matuta Hy. Edw.
3. *albomaculata* Stoll.
octomaculalis Hüb.
Agarista octomaculata Latr.
4. *wittfieldi* Hy. Edw.
5. *langtonii* Coup.
6. *hudsonica* Hy. Edw.
7. *mariposa* Grt. & Rob.
var. *lunata* Stretch.
8. *dipsaci* Grt. & Rob.
9. *sacramenti* Grt. & Rob.

Genus 22. *PSYCHOMORPHA* Harr.

1. *epimenis** Dru.

Genus 23. *EUEDWARDSIA* Grt.

1. *brillians** Neum.

Genus 27. *COPIDRYAS* Grt.

1. *gloveri** Grt. & Rob.

Genus 28. *FENARIA* Grt.

1. *sevorsæ** Grt.

Genus 29. *EUTHISANOTIA* Hüb.

1. *unio** Hüb.
2. *grata* Fab.
assimilis Bdv.
3. *brevipennis* Stretch.
5. *sanctæ Johannis* Wlk.

Genus 30. *CIRIS* Grt.

1. *wilsonii** Grt.

Genus 35. *METAGARISTA* Wlk.

3. *sabulosa* Bdv.

Family V. *CHALCOSIIDÆ*.

Not represented.

Family VI. *THYMARIDÆ*.
Not represented.

Family VII. *ZYGÆNIDÆ*.

Subfamily 1. *ANTHROCERINÆ*.
Not represented.

Subfam. 2. *ADSCITINÆ*.

Genus 9. *TANTURA* Kirby.

1. *majuscula** Hy. Edw.
2. *parvula* Hy. Edw.

Subfam. 3. *ZYGÆNINÆ*.
Not represented.

Subfam. 4. *THYRETINÆ*.
Not represented.

Subfam. 4. *PHAUDINÆ*.
Not represented.

Subfam. 5. *PYROMORPHINÆ*.

Genus 66. *ACOLOITHUS* Clem.

1. *falsarius** Clem.
sanborni Pack.

Genus 67. *HARRISINA* Pack.

1. *coracina* Clem.
2. *texana* Stretch.
3. *americana** Guér.
4. *australis* Stretch.
5. *metallica* Stretch.
9. *nigrina* Graef.

Genus 68. *TRIPROCRIS* Grt.

1. *smithsonianus** Clem.
2. *martenii* French.
3. *aversus* Hy. Edw.

Genus 72. *PYROMORPHA* H.-S.

1. *dimidiata** H.-S.
perlucida Clem.
3. *fusca* Hy. Edw.

Genus 73. *LYCOMORPHA* Harr.

1. *pholus* Dru.
3. *desertus* Hy. Edw.

* Indicates that the species is the type of the genus.

4. *centralis* Wlk.
6. *constans* Hy. Edw.
7. *rata* Hy. Edw.
10. *latercula* Hy. Edw.
12. *palmeri* Pack.
13. *miniata* Pack.
14. *coccinea* Hy. Edw.

Genus 74. *ANATOLMIS* Pack.

1. *grotei** Pack.
2. *fulgens* Hy. Edw.

Subfam. 7. *EUCHROMINÆ*.

Genus 82. *SYNTOMEIDA* Harr.

12. *ipomeæ* Harr.*
ferox Wlk.
euterpe H.-Sch.

Genus 83. *DAHANA* Grt.

1. *atripennis** Grt.

Genus 97. *PHYLLÆCIA* Guér.

5. *texanus* Grt.
plumipes Wlk.

Genus 105. *ERRUCA* Wlk.

1. *pertyi* H.-Sch.

Genus 110. *DIDASYS* Grt.

1. *belæ* Grt.*

Genus 123. *COSMOSOMA* Hüb.

24. *auge** L.
omphale Hüb.

Subfam. 8. *TRICHURINÆ*.

Not represented.

Subfam. 9. *ANTICHLORINÆ*.

Not represented.

Family VIII. *ARCTIIDÆ*.

Subfam. 1. *CHARIDIINÆ*.

Genus 29. *NELPHE* H.-Sch.

6. *carolina* Hy. Edw.

Genus 37. *SCEPSIS* Wlk.

1. *gravis* Hy. Edw.
4. *fulvicollis** Hüb.
semidiaphana Harr.
packardii Grt.
var. *pallens* Hy. Edw.
5. *matthewi* Hy. Edw.
6. *wrightii* Stretch.
7. *edwardsii* Grt.

Subfam. 2. *CTENUCHINÆ*.

Genus 40. *CTENUCHA* Kirby.

1. *virginica** Charp.
latreillana Kirby.

Genus 41. *COMPSOBRIUM* Blanch.

1. *cressonanum* Grt.

Genus 42. *EUCTENUCHA* Grt.

1. *ochroscapus* Grt. & Rob.
corvina Edv.
2. *multifaria** Wlk.
rubroscapus || Bdv.
3. *rubroscapus* Men.
walsinghami Hy. Edw.
4. *brunnea* Stretch.
5. *sanguinaria* Streck.

Genus 43. *PYGOCCTENUCHA* Grt.

1. *robinsonii* Bdv.
2. *harrisii** Bdv.
pyrrhoura Hulst.
7. *funerea* Grt.

Subfam. 3. *PERICOPINÆ*.

Genus 51. *GNOPHÆLA* Wlk.

1. *vermiculata* Grt. & Rob.
æquinoctialis || Bdv.
var. *continua* Hy. Edw.
3. *discreta* Stretch.
arizonæ French.
morrisoni Druce.
4. *latipennis* Bdv.
hopfferi Grt. & Rob.
6. *clappiana* Holl.

* Indicates that the species is the type of the genus.

Subfam. 4. PHÆGOPTERINÆ.

Genus 88. ALEXICLES Grt.

1. *aspersa** Grt.

Genus 91. THEAGES Wlk.

3. ? *laqueata* Hy. Edw.

Genus 105. EUPSEUDOSOMA Grt.

2. *floridum* Grt.

Genus 113. LOPHOCAMPA Harr.

4. *agassizii* Pack.*californica* Wlk.*angulifera* Wlk.*salicis* Bdv.var. *alni* Hy. Edw.5. *maculata* Harr.*fulvoflava* Wlk.*guttifera* H.-Sch.6. *caryæ** Harr.*annulifascia* Wlk.*porphyria* H.-Sch.16. *argentata* Pack.18. *sobrina* Stretch.19. *scapularis* Stretch.20. *ingens* Hy. Edw.21. *occidentalis* French.22. *subalpina* French.

Genus 114. EUHALISIDOTA Grt.

5. *longa* Grt.6. *pura* Neum.

Genus 115. HALISIDOTA Hüb.

2. *davisii* Hy. Edw.5. *labecula* Grt.6. *edwardsii* Pack.*translucida* Wlk.*quercus* Bdv.8. *tessellaris** A. & S.*antiphola* Walsh.*harrisii* Walsh.12. *mixta* Neum.25. *minima* Neum.33. *trigona* Grt.43. *cinnamomea* Bdv.46. *significans* Hy. Edw.49. *ambigua* Stretch [Strek.].*bolteri* Hy. Edw.

Genus 119. ECPANTHERIA Hüb.

13. *sennettii* Lint.37. *cæca* Streck.39. *ocularia** Fab.*scribonia* Stoll.*oculatissima* S. & A.*chryseis* Oliv.*cunegunda* Beauv.ab. *confluens* Oberth.var. *denudata* Sloss.53. *reducta* Grt.

Genus 121. ÆMELIA Kirby.

1. *roseata* Wlk.

Genus 122. ARACHNIS Geyer.

2. *picta* Pack.7. *zuni* Schaus.

Subfam. 5. SPILOSOMATINÆ.

Genus 140. ANTARCTIA Hüb.

12. *beanii* Neum.var. *fuscosa* Neum.

Genus 142. ESTIGMENE Hüb.

1. *acræa* Dru.var. *caprotina* Dru.*pseuderminea* Harr.*californica* Pack.*packardii* Schaupp.*menthastrina* Mart.3. *permaculata* Pack.*nigroflava* Graef.4. *albida* Stretch.5. *dubia* Wlk.6. *niobe* Streck.

Genus 143. SPILOSOMA Steph.

7. *virginica* Fab.8. *prima* Sloss.10. *latipenne* Stretch.11. *vestalis* Pack.12. *antigone* Streck.

Genus 151. HYPHANTRIA Harr.

1. *cunea* Dru.*punctatissima* A. & S.2. *textor** Harr.*candida* Wlk.3. *punctata* Fitch.

* Indicates that the species is the type of the genus.

Genus 152. **ECTYPIA** Clem.

1. *bivittata** Clem.

Genus 153. **ENERYTHRA** Harr.

1. *trimaculata* Smith.
2. *phasma** Harv.

Genus 157. **CYCNI**A Hüb.

1. *egle* Dru.
2. *eglenensis* Clem.
4. *murina* Stretch.
5. *immaculata* Graef.
6. *abdominalis* Grt.
7. *spraguei* Grt.
8. *bolteri* Stretch.
9. *elegans* Stretch.
12. *zonalis* Grt.
13. *vivida* Grt.
14. *perlevis* Grt.
16. *inopinatus* Hy. Edw.
18. *oregonensis* Stretch.
19. *collaris* Fitch.
antica Wlk.
sciurus Bdv.
20. *pudens* Hy. Edw.
21. *tenera** Hüb.
22. *scepsiformis* Graef.
23. *budea* Hüb.
24. *yosemite* Hy. Edw.

Genus 158. **PAREUCHÆTES** Grt.

3. *conspicua* Neum.

Genus 160. **VANESSODES** G. & R.

1. *clarus** G. & R.
2. *fuscipes* Grt.

Genus 174. **SEIRARCTIA** Pack.

1. *echo** A. & S.
2. *clio* Pack.

Genus 177. **PYRRHARCTIA** Pack.

1. *isabella** A. & S.
californica Pack.

Subfam. 6. **ARCTINÆ.**Genus 178. **CODIOSOMA** Stretch.

1. *fulva** Stretch.
2. *nigra* Stretch.

3. *tricolor* Stretch.

4. *eavesii* Stretch.

Genus 179. **PHRAGMATOBIA** Steph.

4. *rubricosa* Harr.
assimilans Wlk.
var. *franconia* Sloss.
rubicundaria Clem.
12. *vagans* Bdv.
pteridis Hy. Edw.
rufula Bdv.
punctata Pack.
var. *proba* Hy. Edw.
15. *rubra* Neum.
16. *walsinghami* Butl.

Genus 190. **PARASEMIA** Hüb.

3. *petrosa* Wlk.
var. *cespites* Grt. & Rob.
var. *cichorii* Grt. & Rob.
4. *geometrica* Grt.
5. *geddesi* Neum.
6. *selwynii* Hy. Edw.
7. *modesta* Pack.
8. *scudderii* Pack.

Genus 191. **HAPLOA** Hüb.

1. *conscita* Wlk.
lactata Smith.
2. *vestalis* Pack.
3. *fulvicosta* Clem.
4. *carolina* Harr.
5. *clymene* Brown.
interruptomarginata Beauv.
comma Wlk.
6. *contigua* Wlk.
7. *colona* Hüb.
clymene Esp.
8. *reversa* Stretch.
9. *suffusa* Smith.
10. *lecontei* Guer.
leucomelas H.-Sch.
11. *militaris* Harr.
12. *confinis* Wlk.
13. *confusa* Lym.

Genus 196. **CALLIMORPHA** Latr.

11. *virginalis* Bdv.
var. *ochracea* Stretch.
var. *guttata* H.-Sch.

* Indicates that the species is the type of the genus.

Genus 200. PLATARCTIA Pack.

1. *parthenos** Harr.
 americana Wlk.
2. *borealis* Moeschl.
6. *yarrowi* Stretch.
7. *remissa* Hy. Edw.

Genus 202. HYPERCOMPA Hüb.

1. *caia** Linn.
 var. *americana* Harr.
 var. *utahensis* Hy. Edw.
6. *opulenta* Hy. Edw.

Genus 207. HYPHORAIA Hüb.

5. *hyperborea* Curt.

Genus 213. APANTESIS Wlk.

1. *virgo* Linn.
2. *parthenice* Kirby.
3. *nerea* Bdv.
4. *Michaba* Grt.
5. *doris* Bdv.
6. *arge* Dru.
 dione Fab.
 coelebs Mart.
 incarnatorubra Goeze.
7. *achaia* Grt. & Rob.
 var. *ochracea* Stretch.
 var. *barda* Hy. Edw.
8. *stretchi* Grt.
9. *shastaensis* French.
10. *intermedia* Stretch.
11. *simplicior* Butl.
12. *saundersii* Grt.
13. *approximata* Stretch.
14. *persephone* Grt.
15. *anna* Grt.
16. *blakei* Grt.
17. *rectilinea* French.
18. *phyllira* Dru.
 B-ata Goeze.
 plantaginis Mart.
 var. *lugubris* Hulst.
19. *bolanderi* Stretch.
20. *nevadensis* Grt. & Rob.
 var. *incorruppta* Hy. Edw.
 var. *sulphurica* Neum.
 var. *mormonica* Neum.
 var. *behri* Stretch.

21. *superba* Stretch.
22. *geneura* Streck.
23. *dodgei* Butl.
24. *williamsi* Dodge.
25. *edwardsii* Stretch.
26. *rhoda* Butl.
27. *determinata* Neum.
28. *pallida* Neum.
29. *bimaculata* Saund.
30. *nais** Dru.
 cuneata Goeze.
 defloriana Mart.
 ♂ *phalerata* Harr.
 var. *vittata* Fab.
 radians Wlk.
 colorata Wlk.
 decorata Saund.
 var. *incompleta* Butl.
31. *franconia* Slosson.
32. *figurata* Dru.
 ceramica Hüb.
 celia Saund.
33. *quadrinotata* Streck.
34. *snowi* Grt.
35. *ochreatea* Butl.
36. *placentia* A. & S.
37. *flammea* Neum.
38. *pallida* Pack.
39. *excelsa* Neum.
43. *virguncula* Kirby.
 var. *complicata* Wlk.
 dahurica Grt.
44. *oithona* Streck.
45. *elongata* Stretch.
46. *dieckii* Neum.
47. *brucei* Hy. Edw.

Genus 215. ORODEMNIAS Wallengr.

1. *quensellii** Payk.
 strigosa Fab.
 var. *gelida* Moeschl.
3. *speciosa* Moeschl.
4. *obliterata* Stretch.
6. *cervinoides* Streck.

Genus 216. CALLARCTIA Pack.

3. *ornata** Pack.
5. *favorita* Neum.
6. *arizonensis* Stretch.

* Indicates that the species is the type of the genus.

Genus 222. **LEPTARCTIA** Stretch.

1. *stretchii* Butl.
2. *dimidiata* Stretch.
3. *boisduvali* Butl.
4. *albifascia* French.
5. *occidentalis* French.
6. *latifasciata* Butl.
7. *fulvofasciata* Butl.
8. *californiæ** Wlk.
adnata Bdv.
9. *wrightii* French.
10. *decia* Bdv.
11. *lena* French.

Family IX. **CYMBIDÆ.**Genus 6. **EARIAS** Hüb.

25. *obliquata* Hy. Edw.

Family X. **LITHOSIIDÆ.**Genus 11. **HYPOPREPIA** Hüb.

1. *fucosa** Hüb.
miniata Kirby.
vittata Harr.
2. *plumbea* Hy. Edw.
3. *cadaverosa* Streck.
4. *inculta* Hy. Edw.

Genus 12. **CISTHENE** Wlk.

4. *unifascia* Grt. & Rob.
5. *tenuifascia* Harr.
6. *packardii* Grt.
7. *subjecta** Wlk.
9. *plumbea* Stretch.
16. *lactea* Stretch.

Genus 13. **PYRALIDIA** Feld.

2. *faustinula* Bdv.
var. *fusca* Stretch.
3. *nexa* Bdv.
grisea Pack.
4. *deserta** Feld.

Genus 14. **HYALOSCOTES** Butl.

1. *fumosa** Butl.

Genus 92. **LITHOSIA** Fab.

37. *argillacea* Pack.
bicolor Grt.
55. *rubropicta* Pack.

Genus 122. **CRAMBIDIA** Pack.

1. *pallida** Pack.
5. *candida* Hy. Edw.
6. *casta* Pack.
7. *cephalica* Grt. & Rob.

Genus 126. **EUSTIXIA** Hüb.

1. *pupula** Hüb.

Genus 144. **COSCINIA** Hüb.

6. *ampla* Grt.

Genus 147. **UTETHEISA** Hüb.

2. *ornatrix* Linn.
var. *hybrida* Butl.
3. *bella* Linn.
var. *intermedia* Butl.

Genus 163. **EUBAPHE** Hüb.

1. *diminutiva* Graef.
2. *belfragei* Stretch.
3. *costata* Stretch.
5. *aurantiaca** Hüb.
rubicundaria Hüb.
6. *brevicornis* Wlk.
7. *ferruginosa* Wlk.
8. *obscura* Stretch.
ferruginosa Pack.
9. *quinaria* Grt.
choriona Reak.
10. *nigricans* Reak.
14. *opella* Grt.
rubicundaria Wlk.
15. *opelloides* Graef.
18. *læta* Guer.
19. *rubropicta* Pack.
20. *ostenta* Hy. Edw.
21. *intermedia* Graef.
22. *treatii* Grt.
23. *fragilis* Streck.
24. *rosa* French.

Genus 166. **EUDULE** Hüb.

1. *texana* French.
2. *unicolor* Rob.
3. *immaculata* Reak.
var. *trimaculata* Reak.

* Indicates that the species is the type of the genus.

Genus 179. PAGARA Wlk.

1. *simplex** Wlk.
- murina* Wlk.

Genus 182. EUPHANESEA Pack.

1. *mendica** Wlk.
- biseriata* H.-Sch.
2. *meridiana* Sloss.

Genus 190. CLEMENSIA Pack.

1. *albata** Pack.
- albida* Wlk.
- cana* Wlk.
2. *umbrata* Pack.
3. *irrorata* Hy. Edw.

Genus 195. NYCTEOLA Hüb.

9. *lintnerana* Spey.
10. *columbiana* Hy. Edw.

Genus 199. EULITHOSIA Hy. Edw.

1. *composita** Hy. Edw.
2. *thoracica* Hy. Edw.

Genus 201. NOLA Leach.

5. *minuscula* Zell.
- fuscata* Grt.
14. *anfracta* Hy. Edw.
34. *ovilla* Grt.
40. *hyemalis* Stretch.

Genus 205. ARGYROPHYES Grt.

1. *pustulata* Wlk.
- nigrofasciata* Zell.
- obaurata* Morr.
2. *ciliaoides** Grt.

Genus 210. LEBENA Wlk.

1. *trinotata** Wlk.
- sexmaculata* Grt.
2. *minna* Butl.
4. *sorghiella* Riley.
8. *melanopa* Zell.

Family XI. HYPsidÆ.

Not represented.

Fam. XII. CALLIDULIDÆ.

Not represented.

Fam. XIII. CYLLOPODIDÆ.

Not represented.

Fam. XIV. DIOPTIDÆ.

Genus 3. PHRYGANIDIA Pack.

1. *californica** Pack.

Genus 4. DIOPTIS Hüb.

18. *megæra* Fab.

Fam. XV. NYCTEMERIDÆ.

Not represented.

Fam. XVI. LIPARIDÆ.

Genus 9. CINGILIA Wlk.

1. *humeralis** Wlk.

Genus 22. CARAMA Wlk.

10. *cretata* Grt.

Genus 61. ARTAXA Wlk.

54. (?) *ingenita* Hy. Edw.

Genus 110. PARORGYIA Pack

1. *leucophæa* A. & S.
4. *clintonii* Grt. & Rob.
5. *achatnia** A. & S.
6. *parallela* Grt. & Rob.
7. *obliquata* Grt. & Rob.
8. *cinnamomea* Grt. & Rob.
9. *basiflava* Pack.

Genus 113. LAGOA Harr.

1. *pyxidifera* A. & S.
2. *opercularis* A. & S.
- lanuginosa* Clem.
3. *crispata* Pack.

Genus 135. DASYCHIRA Hüb.

8. *rossii* Curt.
9. *groenlandica* Hom.
10. *lintneri* Grt.

Genus 143. CALOCASIA Ochs.

2. *diversicolor* Morr.
3. *flavicornis* Smith.

Genus 147. NERICE Wlk.

1. *bidentata** Wlk.

* Indicates that the species is the type of the genus.

Genus 154. COTHOCIDA Wlk.

1. *nigrifera** Wlk.

Genus 164. NOTOLOPHUS Germ.

17. *antiquus** Linn.*nova* Fitch.*badia* Hy. Edw.31. *definitus* Pack.32. *vetustus* Bdv.33. *gulosus* Hy. Edw.34. *canus* Hy. Edw.35. *leucostigma* A. & S.36. *leucographus* Geyer.var. *olivacea* Hy. Edw.61. *inornatus* Beut.

F. XVII. HETEROGYNIDÆ

Not represented.

Fam. XVIII. PSYCHIDÆ.

Genus 2. OIKETICUS Guild.

1. *abbottii* Grt.2. *davidsoni* Hy. Edw.

Genus 3. THYRIDOPTERYX Steph.

1. *ephemeræformis** Haw.*plumifera* Steph.*coniferarum* Pack.2. *meadii* Hy. Edw.

Genus 8. MANATHA Moore.

2. *edwardsii* Heyl.

Genus 25. CHALIA Moore.

14. *rileyi* Heyl.

Genus 32. PSYCHE Schrank.

12. *confederata* Grt. & Rob.13. *carbonaria* Pack.14. *coniferella* Hy. Edw.15. *fragmentella* Hy. Edw.

Genus 33. PLATÆCETICUS Pack.

1. *gloverii** Pack.

Genus 44. CEDONIA Kirby.

1. *exigua** Hy. Edw.

Genus 45. SAPINELLA Kirby.

1. *mora** Grt.

Fam. XIX. LIMACODIDÆ.

Genus 33. SEMYRA Wlk.

4. *beutenmuelleri* Hy. Edw.

Genus 36. PHOBETRUM Hüb.

1. *pithecium** A. & S.*abbotana* Hüb.2. *hyalinum* Walsh.3. *nigricans* Pack.4. *tetradactylus* Walsh.

Genus 37. ADONETA Clem.

1. *spinuloides** H.-Sch.*voluta* Clem.2. *leucosigma* Pack.3. *pygmæa* Grt.

Genus 38. EULIMACODES Moeschl.

1. *scapha* Harr.*undifera* Wlk.

Genus 52. NOCHELIA Clem.

1. *tardigrada** Clem.

Genus 53. EMPRETIA Clem.

1. *stimulea** Clem.

Genus 54. SIBINE H.-Sch.

11. (?) *ephippiatus* Harr.

Genus 67. PARASA Moore.

49. *chloris* H.-Sch.*fraterna* Grt.50. *viridus* Reak.*vernata* Pack.

Genus 68. VARINA Neum.

1. *ornata** Neum.

Genus 69. EUCLEA Hüb.

2. *viridiclava* Wlk.3. *querceti* H.-Sch.*cippus* A. & S.var. *delphinii* Bdv.var. *interjecta* Dyar.var. *monitor* Pack.4. *quercicola* H.-Sch.5. *bifida* Pack.6. *ferruginea* Pack.

* Indicates that the species is the type of the genus.

7. *punctulata* Clem.
9. *incisa* Harv.
10. *elliotii* Pears.
17. *nana* Dyar.

Genus 70. *MONOLEUCA* Grt. & Rob.

1. *semifascia** Wlk.
2. *sulphurea* Grt.
3. *obliqua* Hy. Edw.
4. *subdentosa* Dyar.

Genus 78. *SOSIOSA* Kirby.

1. *textula** H.-Sch.

Genus 79. *TORTRICIDIA* Pack.

1. *flavula* H.-Sch.
2. *pallida* H.-Sch.
3. *testacea** Pack.
4. *ferrigera* Wlk.

Genus 82. *KRONEA* Reak.

1. *minuta** Reak.

Genus 83. *APODA* Haw.

7. *trigona* Hy. Edw.
8. *tetraspilaris* Wlk.
9. *biguttata* Pack.
10. *Y-inversa* Pack.
11. *parallela* Hy. Edw.

Genus 88. *SICYROSEA* Grt.

1. *inornata* Grt. & Rob.
2. *nasoni* Grt.
3. *rude* Hy. Edw.

Genus 89. *PACKARDIA* Grt. & Rob.

1. *elegans** Pack.
2. *fusca* Pack.
3. *geminata* Pack.
4. *albipunctata* Pack.
5. *ocellata* Grt.
6. *nigropunctata* Good.
7. *goodellii* Grt.

Genus 91. *LITHACODES* Pack.

1. *fasciola** H.-Sch.
2. *laticlavata* Clem.
3. *flexuosa* Grt.
4. *cæsonia* Grt.

5. *rectilinea* Grt. & Rob.
latomia Harv.
6. *græffi* Pack.

Genus 94. *HETEROGENEA* Knoch.

5. *shurtleffi* Pack.

Fam. XX. NOTODONTIDÆ.

Genus 12. *LITODONTA* Harv.

1. *hydromeli** Haw.

Genus 13. *HETEROCAMPA* Doubl.

2. *athereo* Harr.
3. *astarte** Doub.
menas Harr.
varia Wlk.
4. *obliqua* Pack.
var. *brunnea* Grt. & Rob.
5. *lunata* Hy. Edw.
7. *trouvelotii* Pack.
8. *subrotata* Harv.
9. *celtiphaga* Harv.
11. *pulverea* Grt. & Rob.
13. *marthesia* Cram.
tessella Pack.
turbida Wlk.
15. *elongata* Grt. & Rob.
16. *guttivitta* Wlk.
albiplaga Wlk.
indeterminata Wlk.
mucorea H.-Sch.
20. *chapmani* Grt.
25. *biundata* Wlk.
olivatus Pack.
26. *viridescens* Wlk.
27. *umbrata* Wlk.
28. *cinerea* Pack.
sobria Wlk.
29. *unicolor* Pack.
30. *marina* Pack.
31. *manteo* Doubl.
cinerascens Wlk.
subalbicans Grt.
32. *doubledayi* Scudd.
34. *belfragel* Grt.
35. *thyatiroides* Wlk.
36. *significata* Wlk.
37. *nigrosignata* Wlk.

* Indicates that the species is the type of the genus.

- 38. *mollis* Wlk.
- 39. *superba* Hy. Edw.
- 53. *nivea* Neum.

Genus 21. *CEDEMASIA* Pack.

- 1. *concinna** A. & S.
- 2. *semirufescens* Wlk.
- 3. *eximia* Grt.
- 4. *nitida* Pack.
- 5. *badia* Pack.
- 6. *salicis* Hy. Edw.
- 7. *riversii* Behr.
- 8. *perangulata* Hy. Edw.

Genus 23. *SCHIZURA* Doubl.

- 1. *unicornis* A. & S.
- 2. *humilis* Wlk.
- 3. *conspicua* Hy. Edw.
- 4. *edmandsii* Pack.
- 5. *apicalis* Grt. & Rob.
- 6. *leptinoides* Grt.
- 7. *mustelina* Pack.
- 8. *ipomææ** Doubl.
biguttatus Pack.
ducens Wlk.
corticea Wlk.
compta Wlk.
confusa Wlk.
var. *cinereofrons* Pack.
ustipennis Wlk.
- 9. *tellifer* Grt.
- 10. *harrisii* Pack.

Genus 25. *SALIGENA* Wlk.

- 1. *personata** Wlk.

Genus 26. *SEIRODONTA* Grt.

- 1. *bilineata** Pack.
associata Wlk.
ulmi Harr.

Genus 27. *HATIMA* Wlk.

- 1. *semirufescens** Wlk.
- 2. *anguina* A. & S.
cucullifera H.-Sch.
punctata Wlk.
cana Wlk.
- 3. *interna* Pack.
tripartita Wlk.

Genus 30. *IANASSA* Wlk.

- 1. *lignicolor** Wlk.
virgata Pack.
lignigera Wlk.
transversata Wlk.
var. *coloradensis* Hy. Edw.

Genus 34. *SYMMERISTA* Hüb.

- 1. *albicosta** Hüb.

Genus 40. *EDEMA* Wlk.

- 2. *albifrons** A. & S.
- 4. *packardii* Morr.
- 6. (?) *obliqua* Wlk.
- 7. (?) *plagiata* Wlk.

Genus 41. *STRETCHIA* Hy. Edw.

- 1. *plusiiformis** Hy. Edw.

Genus 42. *ACHERDES* Wlk.

- 1. *ferraria** Wlk.

Genus 80. *CERTILA* Wlk.

- 1. *flexuosa** Wlk.

Genus 82. *HYPARPAX* Hüb.

- 1. *aurora** A. & S.
venusta Wlk.
rosea Wlk.
- 2. *aurostriata* Graef.

Genus 83. *PSAPHIDIA* Wlk.

- 1. *resumens** Wlk.

Genus 84. *CERURA* Schrank.

- 15. *scolopendrina* Bdv.
- 16. *cinerea* Wlk.
- 17. *cinereoides* Dyar.
- 18. *scitisscripta* Wlk.
- 19. *borealis* Guér.
furcula A. & S.
- 20. *albicomma* Streck.
- 21. *candida* Lintn.
- 22. *occidentalis* Lintn.
borealis Harr.
- 23. *aquilonaris* Lintn.
- 25. *multiscripta* Riley.
- 38. *modesta* Hudson.

* Indicates that the species is the type of the genus.

Genus 89. *PANTHEA* Hüb.

- 3.
- leucomelæna*
- Morr.

Genus 93. *THAUMETOPCEA* Hüb.

- 10.
- grisea*
- Neum.

Genus 96. *GLUPHISIA* Bdv.

3. *septentrionis* Wlk.
 4. *trilineata* Pack.
 5. (?) *tearlii* Hy. Edw.
 6. (?) *wrightii* Hy. Edw.
 7. (?) *severa* Hy. Edw.
 8. *ridenda* Hy. Edw.
 9. *rupta* Hy. Edw.
 10. *albofascia* Hy. Edw.
 11. *formosa* Hy. Edw.
 12. *avimacula* Hudson.

Genus 117. *ELLIDA* Grt.

- 1.
- gelida*
- * Grt.

Genus 122. *NOTODONTA* Ochs.

23. *stragula* Grt.
 24. *basitriens* Grt.
 25. *simplaria* Graef.
 26. *plagiata* Wlk.
 27. *notaria* Hy. Edw.

Genus 125. *LOPHODONTA* Pack.

1. *angulosa* A. & S.
 2. *georgica* H.-Sch.
 3. *ferruginea* Pack.
 4. *plumosa* Hy. Edw.

Genus 129. *OCHROSTIGMA* Hüb.

- 4.
- tortuosa*
- Tepp.

Genus 137. *LOPHOPTERYX* Steph.

14. *americana* Haw.
 15. *elegans* Streck.
 var. *orissa* Streck.

Genus 142. *PHEOSIA* Hüb.

10. *rimosa* Pack.
 11. *portlandia* Hy. Edw.
 12. *dimidiata* H.-Sch.
 13. *californica* Stretch.

Genus 146. *MELALOPHA* Hüb.

- 7.
- apicalis*
- Wlk.

8. *inclusa* Hüb.

anastemosis S. & A.
americana Harr.

9. *incarcerata* Bdv.
 10. *jocosa* Hy. Edw.
 11. *strigosa* Grt.
 12. *luculenta* Hy. Edw.
 13. *ornata* Grt. & Rob.
 14. *inornata* Neum.
 15. *astoriæ* Hy. Edw.
 16. *palla* French.
 17. *inversa* Pack.
 18. *indentata* Pack.
 19. *albosigna* Fitch.
 20. *vau* Fitch.
 21. *brucei* Hy. Edw.
 22. *bifria* Hy. Edw.

Genus 153. *DATANA* Wlk.

Unchanged. Contains our species only.

Genus 155. *NADATA* Wlk.

1. *doubledayi* Pack.
 var. *oregonensis* Butl.
 2. *gibbosa** A. & S.
 3. *behrensii* Hy. Edw.

Fam. XXI. SPHINGIDÆ.

Subfam. 1. MACROGLOSSINÆ.

Genus 1. *HEMARIS* Dalm.

1. *fuscicaudis* Wlk.
 2. *floridensis* Grt. & Rob.
 3. *thysbe* Fab.
 pelasgus Cram.
 cimbiciformis Steph.
 etolus Bdv.
 4. *ruficaudis* Kirby.
 5. *buffaloensis* Grt. & Rob.
 6. *uniformis* Grt. & Rob.
 7. *pyramus* Bdv.
 8. *gracilis* Grt. & Rob.
 12. *axillaris* Grt. & Rob.
 grotei Butl.
 13. *marginalis* Grt.
 21. *diffinis* Bdv.
 fusiformis A. & S.
 22. *æthra* Streck.

* Indicates that the species is the type of the genus.

23. *palpalis* Grt.
24. *tenuis* Grt.
fumosa Streck.
25. *thetis* Grt. & Rob.
26. *metathetis* Butl.
27. *rubens* Hy. Edw.
28. *senta* Streck.
29. *brucei* French.
30. *cynoglossum* Hy. Edw.

Genus 3. *LEPISESIA* Grt.

1. *flavofasciata** Wlk.
2. *ulalume* Streck.

Genus 11. *EUPROSERPINUS* G. & R.

1. *phæton** Grt. & Rob.
errato Bdv.
2. *euterpe* Hy. Edw.

Genus 12. *DIENECES* Butl.

1. *clarkiae** Bdv.
victoria Grt.
2. *circæ* Hy. Edw.

Genus 14. *PERIGONIA* H.-Sch.

10. *tacita* Druce.

Genus 17. *SPHECODINA* Blanch.

1. *abbottii** Swains.

Genus 18. *AMPHION* Hüb.

1. *nessus** Cram.

Genus 19. *DEIDAMIA* Clem.

1. *inscriptum** Harr.

Genus 21. *PTEROGON* Bdv.

3. *gauræ* A. & S.
4. *juanita* Streck.
5. *terlooi* Hy. Edw.

Subfam. 2. *CHCEROCAMPINÆ*.Genus 40. *THERETRA* Hüb.

81. *tersa* Linn.
88. *procne* Clem.

Genus 46. *DEILEPHILA* Ochs.

2. *lineata* Fab.
daucus Cram.

6. *galii* Rott.
var. *intermedia* Kirby.
chamænerii Harv.
7. *oxybaphi* Clem.

Genus 47. *DUPO* Hüb.

1. *vitis** Linn.
fasciatus Sulz.
jussieuæ Hüb.
2. *linnei* Grt. & Rob.
vitis Stoll.

Genus 48. *PHILAMPELUS* Harv.

3. *pandorus** Hüb.
ampelophaga Harr.
satellitita Dru.
6. *satellitita* Linn.

Genus 49. *PHOLUS* Hüb.

1. *achemon** Dru.
crantor Cram.

Genus 52. *DARAPSA* Wlk.

5. *versicolor* Harr.

Genus 55. *EVERYX* Ménétr.

1. *chœrilus* Cram.
azalæ S. & A.
chlorinda Mart.
3. *myron* Cram.
pampinatrix A. & S.
var. *cnotus* Hüb.

Subfam. 3. *AMBULICINÆ*.Genus 61. *PACHYLIA* Wlk.

1. *lyncea* Clem.

Subfam. 4. *SPHINGINÆ*.Genus 65. *DILUDIA* Grt. & Rob.

1. *brontes* Dru.

Genus 67. *DAREMMA* Wlk.

1. *undulosa** Wlk.
brontes Bdv.
2. *hageni* Grt.
3. *catalpæ* Bdv.

* Indicates that the species is the type of the genus.

Genus 69. DOLBA Wlk.

1. *hylæus** Dru.
prini A. & S.

Genus 76. PHLEGETHONTIUS Hüb.

1. *rustica* Fab.
chionanthi A. & S.
2. *dalica* Kirby.
13. *sexta** Joh.
carolina Linn.
14. *lycopersici* Bdv.
15. *dilucida* Hy. Edw.
16. *quinquemaculata* Haw.
carolina Don.
celeus Hüb.
35. *cingulata* Fab.
convolvuli Dru.
affinis Goeze.
druræi Don.
pungens Esch.
var. *decolora* Hy. Edw.

Genus 77. SPHINX Linn.

2. *chersis* Hüb.
cinerea Harr.
3. *oreodaphne* Hy. Edw.
4. *libocedrus* Hy. Edw.
5. *insolita* Lint.
6. *perelegans* Hy. Edw.
7. *leucophæata* Clem.
9. *andromedæ* Bdv.
10. *separata* Neum.
14. *canadensis* Bdv.
plota Streck.
15. *kalmiæ* A. & S.
16. (?) *capreolus* Schauf.
17. *drupiferarum* A. & S.
18. *vancouverensis* Hy. Edw.
19. *vashti* Streck.
20. *utahensis* Hy. Edw.
21. *albescens* Tepp.
22. *elsa* Streck.

Genus 78. GARGANTUA Kirby.

1. *eremitus** Hüb.
sordida Harr.
2. *eremitoides* Streck.
3. *gordius* Stoll.
pæcila Steph.
4. *luscitiosa* Clem.

Genus 80. HYLOICUS Hüb.

2. *saniptri* Streck.
9. *plebeia* Fab.
10. *dollii* Neum.
11. *coloradus* Smith.
12. *sequoiæ* Bdv.
♂ coniferarum Wlk.
14. *strobi* Bdv.
17. *cupressi* Bdv.

Genus 82. LAPARA Wlk.

1. *bombycoides** Wlk.

Gen. 83. CHLÆNOGRAMMA Smith

1. *jasminearum** Guér.

Genus 84. CERATOMIA Harr.

1. *amyntor** Geyer.
quadricornis Harr.

Genus 85. ELLEMA Clem.

1. *coniferarum* A. & S.
cana Mart.
2. *harrisii* Clem.
coniferarum Harr.
3. *pineum* Lint.

Genus 86. EXEDRIUM Grt.

1. *halicarniæ** Streck.

Genus 87. DILOPHONOTA Burm.

1. *ello** Linn.
2. *cænotrus* Stoll.
3. *melancholica* Grt.
♀ cinerosa Grt.
4. *festæ* Hy. Edw.
7. *merianæ* Grt.

Genus 90. CAUTETHIA Grt.

3. *grotei* Hy. Edw.

Genus 91. ANCERYX Wlk.

3. *edwardsii* Butl.

Subfam. 5. MANDUCINÆ.

Not represented.

* Indicates that the species is the type of the genus.

Subfam. 6. SMERINTHINÆ.

Genus 105. MARUMBA Moore.

33. *modesta* Harr.
princeps Wlk.
populicola Bdv.
 var. *occidentalis* Hy. Edw.
 34. *imperator* Streck.
 35. *cablei* Von Reiz.

Genus 109. SMERINTHUS Latr.

3. *vancouverensis* Butl.
 5. *ophthalmicus* Bdv.
 var. *pallidulus* Hy. Edw.

Genus 110. EUSMERINTHUS Grt.

3. *geminatus** Say.
 4. *cerisii* Kirby.
 5. *astarte* Streck.
 7. *myops* A. & S.
rosacearum Bdv.

Genus 111. PAONIAS Hüb.

1. *excæcata** A. & S.
 2. *pavoninæ* Geyer.

Genus 112. CALASYMBOLUS Grt.

1. *astylos** Dru.
io Gray.

Genus 113. CRESSONIA Grt. & Rob.

1. *juglandis** A. & S.
instabilis Mart.
 2. *hyperbola* Sloss.
 3. *robinsonii* Butl.
 4. *pallens* Streck.

Genus 116. ARCTONOTUS Bdv.

1. *lucidus** Bdv.

Fam. XXII. BOMBYCIDÆ.

Genus 11. BOMBYX Linn.

1. *mori* Linn.

Genus 27. THAUMA Hy. Edw.

1. *ribis** Hy. Edw.

F. XXIII. DREPANULIDÆ.

Genus 3. PEROPHORA Harr.

1. *melsheimeri** Harr.
egenaria Wlk.

Genus 5. ORETA Wlk.

17. *rosea* Wlk.
marginata Wlk.
americana H.-Sch.
formula Grt.
 18. *irrorata* Pack.

Genus 7. LACOSOMA Grt.

1. *chiridota** Grt.

Genus 11. PLATYPTERYX Lasp.

13. *arcuata* Wlk.
fabula Grt
 14. *siculifer* Pack.
 15. *genicula* Grt.
 27. *fasciata* Steph.
uncula Haw.

Genus 14. FALCARIA Haw.

4. *bilineata* Pack.

XXIV. CERATOCAMPIDÆ.

Genus 1. ANISOTA Hüb.

3. *stigma* Fab.
 4. *senatoria* S. & A.
 5. *virginiensis** Dru.
pellucida S. & A.
astynome Oliv.

Genus 2. DRYOCAMPA Harr.

1. *rubicunda** Fab.
 var. *alba* Grt.
pallida Bowles.

Genus 3. SPHINGICAMPA Walsh.

1. *bicolor** Harr.
distigma Walsh.
 var. *suprema* Neum.
 2. *bisecta* Lintn.
 var. *nebulosa* Neum.
 5. *heiligbrodti* Harv.

Genus 6. CITHERONIA Hüb.

2. *regalis** Fab.
regia S. & A.
laocoon Cram.
ab. sæengeri Neum.
7. *sepulchralis* Grt. & Rob.
8. *infernalis* Streck.
11. *imperialis* Dru.
imperatoria S. & A.
didyma Beauv.
var. *punctatissima* Neum.
var. *nobilis* Neum.

Genus 7. COLORADIA Blake.

1. *pandora** Blake.

Fam. XXV. SATURNIIDÆ.

Genus 3. ATTACUS Linn.

13. *cinctus* Tepp.
18. *erycina* Shaw.
hesperus Cram.
splendidus Beauv.

Genus 6. SAMIA Hüb.

1. *cecropia* Linn.
2. *columbia* Smith.
3. *gloveri* Streck.
var. *reducta* Neum.
4. *californica* Grt.
ceanothi Behr.
euryalus Streck.

Genus 7. CALLOSAMIA Pack.

1. *calleta* Westw.
polyommata Tepp.
2. *promethea* Dru.
3. *angulifera* Wlk.

Genus 8. TELEA Hüb.

1. *polyphemus** Cram.
paphia Linn.
fenestra Perry.
var. *oculea* Neum.

Genus 35. TROPÆA Hüb.

8. *luna* Linn.
9. *rossi* Ross.

Genus 47. SATURNIA Schrank.

17. *galbina* Clem.

Genus 54. CALOSATURNIA Smith.

1. *mendocino** Behrens.

Genus 58. AUTOMERIS Hüb.

11. *zelleri* Grt. & Rob.
39. *pamina* Neum.
var. *aurosea* Neum.
40. *zephyria* Grt.
47. *io* Fab.
varia Wlk.
fabricii Bdv.
corollaria Perry.
48. *lilith* Streck.

Genus 62. HEMILEUCA Wlk.

1. *yavapai* Neum.
2. *juno* Pack.
3. *grotei* Grt. & Rob.
4. *diana* Pack.
5. *maja* Dru.
proserpina Fab.
var. *lucina* Hy. Edw.
6. *nevadensis* Stretch.
7. *californiæ* Wright.
8. *electra* Wright.

Genus 63. ARGYRAUGES Grt.

1. *neumoegeni** Hy. Edw.

Genus 67. PSEUDOHASIS Grt. & Rob.

1. *eglanterina** Bdv.
var. *shastaensis* Behrens.
var. *denudata* Neum.
var. *marcata* Neum.
2. *nutalli* Streck.
var. *arizonensis* Streck.
3. *hera* Harr.
pica Wlk.

Genus 68. EULEUCOPHÆUS Pack.

1. *tricolor** Pack.
2. *sororius* Hy. Edw.
3. *hualapai* Neum.
4. *neumoegeni* Hy. Edw.

F. XXVI. LASIOCAMPIDÆ.

Genus 85. PHYLLODESMA Hüb.

4. *americana* Harr.
ilicifolia A. & S.
occidentis Wlk.
carpinifolia Bdv.
5. *ferruginea* Pack.
6. *californica* Pack.
7. *roseata* Stretch.
mildei Stretch.
8. *alascensis* Stretch.

Genus 90. GLOVERIA Pack.

1. *arizonensis** Pack.
6. *gargamella* Streck.

Genus 100. HETEROPACHA Harv.

1. *rileyana** Harv.

Genus 117. CLISIOCAMPA Curt.

5. *californica* Pack.
pseudoneustria Bdv.
6. *fragilis* Stretch.
7. *strigosa* Stretch.
9. *erosa* Stretch.
10. *thoracica* Stretch.
11. *incurva* Hy. Edw.
12. *disstria* Hüb.
neustria A. & S.
sylvatica Harr.
drupacearum Bdv.
13. *americana* Fab.
castrensis A. & S.
decipiens Wlk.
frutetorum Bdv.

Genus 120. ARTACE Wlk.

1. *punctistriga** Wlk.
var. *rubripalpis* Feld.
2. *albicans* Wlk.
punctivena Wlk.

Genus 129. TOLYPE Hüb.

1. *laricis* Fitch.
minuta Grt.
2. *velleda** Stoll.
3. *distincta* French.

Genus 144. APATELODES Pack.

1. *torrefacta* A. & S.
var. *floridana* Hy. Edw.
2. *angelica* Grt.
hyalinopunctata Pack.
3. *indistincta* Hy. Edw.

G. 145. ACRONYCTODES Hy. Edw.

1. *insignata** Hy. Edw.

Genus RHAGONIS Wlk.

1. *bicolor** Wlk.

Fam. XXVII. PINARIDÆ.

Not represented.

Fam. XXVIII. ZEUZERIDÆ.

Genus 1. QUADRINA Grt.

1. *diazoma** Grt.

Genus 4. TRYPANUS Ramb.

9. *populi* Wlk.
10. *angrezi* Bail.
11. *mucidus* Edw.
12. *brucei* French.
13. *centerensis* Lintn.
14. *macmurtrei* Guér.
15. *nodosus* Lint.

Genus 8. HYOPTA Hüb.

6. *bertholdi* Grt.
7. *manfredi* Neum.
8. *henrici* Grt.

Genus 19. PRIONOXYSTUS Grt.

1. *robinæ* Peck.
♀ *plagiatus* Grt.
crepera Grt.
2. *reticulatus* Lint.
4. *querciperda* Fitch.
5. *nanus* Streck.

Genus 21. COSSULA Bail.

1. *basalis* Wlk.
slossoni Hy. Edw.
magnifica Bail.

* Indicates that the species is the type of the genus.

Genus 27. ZEUZERA Latr.

4. *decipiens* Kirby.
pyrinus † Fab.
5. *canadensis* H.-Sch.

Fam. XXIX. HEPIALIDÆ.

Genus 1. HEPIALUS Fab.

8. *desolatus* Streck.
15. *gracilis* Grt.
16. *californicus* Bdv.
17. *mustelinus* Pack.
18. *baroni* Behrens.
19. *lenzi* Behrens.
20. *modestus* Hy. Edw.
21. *confusus* Hy. Edw.
22. *inutilis* Hy. Edw.
32. *hyperboreus* Moeschl.
33. *pulcher* Grt.
34. *labradoriensis* Pack.

35. *furcatus* Grt.
40. *hectoïdes* Bdv.
43. *sequoiolus* Behrens.
44. *sangaris* Streck.
45. *mendocinolus* Behrens.
46. *mathewi* Hy. Edw.
47. *mcglashani* Hy. Edw.
48. *behrensi* Streck.
♀ *montanus* Streck.
var. *tacomæ* Hy. Edw.
49. *rectus* Hy. Edw.
50. *anceps* Hy. Edw.
51. *auratus* Grt.

Genus 3. STHENOPIS Pack.

1. *argenteomaculatus** Harr.
2. *argentatus* Pack.
3. *quadriguttatus* Grt.
4. *purpurascens* Pack.
5. *thule* Streck.

* Indicates that the species is the type of the genus.